

Joshua Chang

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EDUCATION

University of Illinois at Urbana-Champaign

Bachelor of Science in Statistics and Computer Science

August 2015 – Dec 2018

[CS]: Programming Languages & Compilers, Parallel Programming, Algorithms & Models of Computation, Numerical Methods, Database Systems, System Programming, Data Structures, Computer Architecture, Discrete Structures

[STATS]: Statistics and Probability I / II / CS, Methods of Applied Statistics, Statistical Computing

[MATH]: Calculus II / III, Linear Algebra, Linear Programming

WORK EXPERIENCE

Granular | Software Engineer Intern

May 2018 – August 2018

- Improved development workflow by migrating scripts for Docker builds
- Added resource monitoring to a project using the Datadog Tracing API
- Implemented Redis caching on a web app to improve query times
- Created ChatOps Slackbot for efficient assignment and management of tasks. Designed and implemented the dependency graph, database schema, backend logic, and containerized the Postgres database and the Slackbot
- Implemented with SQLAlchemy, Alembic, PostgreSQL, NetworkX, Python, and Flask

Capital One | Software Developer Intern

Gosu Finder

May 2017 – Dec 2017

- Built the back-end API that retrieves employees within Capital One Tech through Slack and Github.
- Ranks users by various metrics of competency within their preferred languages and tools in order to classify skilled programmers.
- Uses Neo4j as its graph database to accurately model user to user, commits, repositories, etc. relationships
- Built the ranking system, which identifies and processes questions, answers, and emojis of Slack messages, as well as Github metrics of commits, pull requests, etc.
- The system aggregates these metrics by user to create a normalized general score by which to rank programmers.

EASE Dashboard

May 2017 – August 2017

- Developed a web dashboard to process and visualize company data (revenue, user ratings, etc.).
- Creates on-the-fly charts and graphs with live data for use in monthly business reviews.
- Built back-end routes with Express, Node, and Promise-pg for asynchronous queries to PostgreSQL; built front-end with jQuery, Angular, HTML5, CSS, D3, and Javascript
- Features automatic data fetching (dockerized database) and deployment (CircleCI), and is hosted on AWS

NCSA | Illinois Data Science Initiative Researcher

January 2017 – May 2017

- Wrote a technical report on linear classification and regression techniques with Spark on a terabyte of financial data that includes use of support vector machines, logistic regression, and least squares regression

PROJECTS

Optimized Reddit Scraper

August 2017 - Present

- Multithreaded fetching paired with DNNs for fast image compressions. Pulls Reddit images and displays them on an optimized React web app and caches with Redis to reduce backend latency.

Github Token Generator

August 2017

- Useful CLI for access token creation that features custom scope settings and two-factor authentication support.

SKILLS

Proficient: Python, C, C++, Java, SQL, NoSQL, R, Bash,

Web: Javascript, CSS, HTML, jQuery, Node, Flask, Angular, Docker, Redis, Jenkins, CircleCI, Gulp, Grunt, Neo4j